Population Control

Does the BLM use fertility control?

Yes, the BLM has promoted and supported the development of an effective contraceptive agent for wild horses since 1978. The most promising agent is a Porcine Zona Pellucida (PZP) vaccine that was developed in the 1990s, but is not commercially available. The PZP vaccine is used by BLM in cooperation with the Humane Society of the United States. A major part of the Proposed Action is to gather as many of the wild horses as possible within the HMA in order to apply fertility control.

How are fertility control and adjusting the sex ratio implemented?

Fertility control treatments and modification of sex ratios of released animals would slow population growth and could increase the time period before another gather was required.

- All mares selected for release, including those previously treated with fertility control, would be treated/retreated with a two-year PZP-22 or similar vaccine and released back to the range. Immuno-contraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Mares would be selected to maintain a diverse age structure, herd characteristics and conformation.
- Studs selected for release would be released to increase the post-gather sex ratio to approximately 60 percent studs in the remaining herds. Studs would be selected to maintain a diverse age structure, herd characteristics and conformation.

Animals would be removed from the HMA using the following selective removal strategy to the extent possible:

- first priority – age 5 years and younger
- second priority – age 6-15
- third priority – age 16 and older

Why doesn't the BLM just implement fertility control rather than removing wild horses from the range?

The BLM's policy is to apply fertility control to all wild horse mares returned to the range when site-specific environmental analysis supports its use. However, an ideal fertility control agent has not yet been perfected for use in wild horses. For example, the two year PZP-22 vaccine has its highest level of efficacy and longest length of control when applied during a three to four month window prior to foaling, primarily November through February. When applied during the summer, PZP-22 has shown to be effective for only about one year.

Application requires the mare to be physically captured, restrained and vaccinated. Field darting with the one year PZP vaccine is not practical for most of the free-roaming herds in the west. To substantially slow herd growth rates, most of a herd's mares would need to be captured and vaccinated with PZP-22 every two years during the winter. Other limitations with respect to PZP-22 are: (1) it is not commercially available and (2) the BLM's use of the vaccine is limited to an investigational exemption issued by the Food and Drug Administration and held by the Humane Society of the United States.

Veterinary Student, examines a foal captured from the Fish Creek Complex, summer 2005.

Has the BLM considered other fertility control methods or procedures?
The BLM has increased research funding devoted to the development of a longer acting PZP vaccine. An ongoing research project with the University of Toledo-Health Science Campus is aimed at extending the efficacy of the current PZP-22 vaccine.

The BLM has recently initiated research through the United States Geological Survey and Oregon State University to study a fertility control vaccine called SpayVac. Based on recent research, SpayVac may have the potential to slow population growth rates for as long as 4 to 5 years.

Why doesn't the BLM just geld (neuter) the stallions?
Research has shown that while neutering males can slow population growth to a minor extent, a single intact stallion can breed a large number of mares. Therefore, the BLM continues to concentrate its research on finding an effective and long-lasting fertility control agent for mares.

What is the minimum effective herd size necessary to maintain genetic diversity?
A population size of 50 effective breeding animals (a total population size of about 150-200 animals) is recommended to maintain an acceptable level of genetic diversity within wild horse populations.

This number is the minimum required to keep the rate of loss of genetic variation at 1% per generation.

Horse in the working chute ready to be aged. Paymaster HMA gather, September 2006.

How does the BLM maintain genetic diversity when wild horse or burro herd size falls below the recommended minimum size?

If a recommended minimum herd size of about 150-200 wild horses (50 effective breeding age animals) cannot be maintained, a number of acceptable options exists to mitigate genetic concerns: maximize the number of breeding age in the herd (age 6-10 years); adjust the sex ratio in favor of males to increase the number of harems and effective breeding males; introduce 1-2 young mares every generation (about every 10 years) from other herds living in similar environments. A significant number of our HMAs are adjacent to other HMAs and interaction/movement occurs between them which allows for the maintenance of genetic diversity as well.